

IN THE CLAIMS:

1-38. (cancelled)

39. (withdrawn) An antibody capable of specifically forming a antibody complex with the protein of claim 1.

40. (withdrawn) The antibody of claim 39, wherein the antibody is conjugated to a detectable agent.

41. (withdrawn) An agent that inhibits the binding of the protein of claim 1 to the cytoplasmic domain of CD40 receptor.

42. (withdrawn) A hybridoma cell line which produces the monoclonal antibody of claim 39.

43. (cancelled)

44. (withdrawn) A method of modulating cellular function regulated by the CD40 in a cell, which comprises introducing into the cell a CD40bp nucleic acid and growing the cell under suitable conditions such that the nucleic acid is transcribed and translated into CD40bp protein in the cell.

45. (withdrawn) A method for screening for a CD40 immunosuppressive agent, which comprises:

- a) providing a CD40 cytoplasmic domain receptor bound to a solid support;
- b) contacting the agent with the receptor bound support of step a) under conditions favoring binding of the cytoplasmic domain to the receptor to CD40bp;
- c) contacting detectably-labeled CD40bp to the solid support of step b) under conditions favoring binding of CD40 cytoplasmic domain receptor to CD40bp;

- d) detecting the presence of any complex formed between CD40 receptor and CD40bp to form CD40 receptor-CD40bp complex; and
- e) the absence of CD40 receptor-CD40bp complex being indicative that the agent inhibits binding of CD40bp to CD40 receptor and therefore is an immunosuppressive agent.

46. (withdrawn) A method for screening for a CD40 immunosuppressive agent, which comprises:

- a) providing a CD40 cytoplasmic domain receptor to a solid support;
- b) contacting detectably-labeled CD40bp to the solid support of step a) under conditions favoring binding of CD40 cytoplasmic domain receptor to CD40bp;
- c) contacting the agent to be screened with the receptor bound support of step b) under conditions favoring binding of the cytoplasmic domain to the receptor to Cd40bp;
- d) detecting the presence of any complex formed between CD40 receptor and CD40bp to form CD40 receptor-CD40bp complex; and
- e) the absence of CD40 receptor-CD40bp complex being indicative that the agent inhibits the binding of CD40bp to CD40 receptor and therefore is an immunosuppressive agent.

47-48. (cancelled)

49. (cancelled)

50. (cancelled)

51. (previously presented) An isolated nucleic acid that encodes a polypeptide comprising the amino acid sequence shown in SEQ ID NO:2.

52. (currently amended) The isolated nucleic acid of ~~claims~~ claim 49, 50, or 51, wherein the nucleic acid is cDNA or RNA.

53. (currently amended) A composition comprising the isolated nucleic acid of ~~claims~~ claim 49, 50, or 51 and a carrier.

54. (cancelled)

55. (currently amended) A vector comprising the isolated nucleic acid of ~~claims~~ claim 49, 50, or 51.

56. (currently amended) An isolated host cell comprising the isolated nucleic acid of ~~claims~~ claim 49, 50, or 51.

57. (currently amended) A method of producing a mammalian protein or polypeptide having the ability to bind the cytoplasmic region of CD40 receptor, which comprises: a) growing the host cell of claim 56 under suitable conditions such that the nucleic acid is transcribed ~~as and~~ translated into protein and b) purifying ~~the~~ said protein ~~so produced~~.

58. (withdrawn) A method of modulating cellular function regulated by the CD40 in a cell, which comprises introducing into the cell an isolated nucleic acid of claims 48 to 51 and growing the cell under suitable conditions such that the nucleic acid is transcribed and translated into CD40bp protein in the cell.

59-61. (cancelled)